REMARKS

Claims 7, 8, 25, 31-34, 38-39, and 41-44 remain pending and new claims 45 and 46 are added. The rejection of the previously pending claims is noted and respectfully traversed.

The rejection of claims 7, 8, 25, 31-34, 38-39 and 41-44 under 35 U.S.C. 112, first paragraph, is noted and believed to be now overcome by the elimination of the term "motorless" in all of the rejected claims where it appears.

The rejection of claims 25, 31-34, 38 and 39 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hukuba, is noted and believed overcome as regards these claims and newly added claims 45 and 46, as discussed below.

The rejection asserts on page 4, lines 6-7 of the action, that "when the ball (66) is between adjacent concave portions (68), the head would "freely flop". It is respectfully submitted that the terminology "freely flop" does not apply here. First, there would be some frictional resistance of the ball against the wall surface intermediate the concave portions 68, so that the head could not "flop freely". Second, and more importantly, the receptacle or housing surrounding the shank of head portion 10 functions as a barrier to prevent angular motion greater than that shown in Fig. 11, for example, of angular positions a_1,a_2, a_3. Fig. 13 further illustrates the limitation on head part 10, whereby its lower end is barred from further angulation, and the top edge of receptacle 56 also sets limits for pivoting of the head part. Head part 10 does pivot between but not beyond predetermined limits or predetermined angular orientations.

A key structural feature and function of the present toothbrush invention concerns the movement of the head part from its specific single or sole

normal operative position to either (A) a specific position different from said specific normal operative position, or (B) an area comprising a range of positions different from said specific normal operative position.

Condition A above is illustrated in Figs. 11, 11A and 11B with descriptions on pages 6-7 of the specification. Here is a toothbrush having a specific sole normal operative position when spring detent 65B is in recess 67A, and an inoperable position when spring detent 65B is in recess 67B. Pivotal movement occurs automatically when head 65 receives excessive force from bristles urged against teeth or gums.

It should also be noted on page 6, last line, that the "head will be free to 'flop' backward," namely, the head (when dislodged from detent-in-recess 67A), will flop freely between positions of recesses 67A and 67B, or alternatively the detent may lodge in recess 67B and in such orientation be inoperable but not flopping. This is an example of condition (B) above where there are a range of inoperative positions different from the one normal operative position.

The Hukuba toothbrush device has a range of operative positions as the head oscillates and has no inoperative position. The present claims define the present invention with respect to the features that distinguish it from Hukuba. It is respectfully submitted that a person skilled in this art could not reasonably start with Hukuba's device, and limit it to a single operative position since it constantly oscillates between positions, and also could not establish a non-operative position since it must be operative in all positions.

As discussed in applicant's prior response, the Hukuba device reduces the head oscillation when the angulation increases, and allows maximum speed of oscillation when the angulation is least. A principal reason for this variation is to control the toothbrush from greater speed during greater oscillation which might create excessive force that could damage teeth, gums or mouth.

The present invention, first is not an electrical, reciprocating toothbrush, so that arguably Hukuba is not even reasonably relevant prior art. However, both devices concern safety from excessive force, and the present invention solves this issue in a manner totally and absolutely different from Hukuba. In the present claims we have a defined orientation where the toothbrush is operable and a second orientation where it is not operable. Excessive pressure on the teeth and bristles leads the head to automatically pivot to the second angulation different from the acceptable orientation, and thus to be positioned in an orientation where it is inoperative as a normal functional toothbrush.

The Hukuba toothbrush discloses a structure: (a) that is nothing like that of the present claims, and (b) that is totally non-obvious from Hukuba. Hukuba discloses head movement while in its operative modes, and no head orientation beyond the designed limits.

When there is excessive force the new toothbrush allows (per its automatic pressure release) head movement to a position different from its normal and operative position. In such moved (released) position the toothbrush becomes inoperative. Hukuba's device never becomes inoperative. It merely runs faster or slower. In fact, with greater pressure, its oscillation is diminished, but it does not stop, and accordingly, damage to teeth and gums from excessive pressure can still occur. The new invention totally prevents such damage from excessive pressure.

From this observation it is urged that Hukuba is not an appropriate reference for use in a rejection on obviousness. It is respectfully submitted that from Hukuba, it is neither obvious nor reasonable to design a toothbrush whose head part moves beyond an acceptable range of angulations and in fact ceases to be operable. Also, the Hukuba device has no condition where excessive pressure is impossible, as is the case with the present invention.

The independent claims 31, 38, 39 and 41 have all been amended to clarify and limit the invention claimed to a structure patentably distinguishable over Hukuba. For example, claim 31 recites that the head part has a single and only first orientation for use in a normal state, and that upon application of excessive force the catch means will release the head to pivot rearwardly to an angular orientation different from said first orientation.

Claim 46, dependent on claim 31, adds the limitation that there are multiple orientations different from the first and only operable orientation.

Claim 47, dependent on claim 31, adds the limitation that there is a single orientation different from said first operable orientation.

Claim 25, dependent on claim 46, adds the limitation where the hinge comprises a yoke and tongue structure.

Claims 7 and 8, dependent on claim 31, adds the limitation of a predetermined threshold level of force to cause the head to move out of the predetermined acceptable orientation.

Claims 38-40 disclose method using the new automatic pressure release toothbrush. The amendments and limitations in amended claim 31 are substantially incorporated into these method claims and thus in claims 42-44 dependent hereon.

In view of the amendments herein and the discussions and distinctions presented, it is believed that all objections and rejections have been overcome. Accordingly, reconsideration and favorable action is respectfully requested.

If any additional fees are due please charge same to our Deposit

Account No. 01-0035 and if any additional extension of time is required, please consider this a petition for same.

Respectfully Submitted,

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